



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/700,914	11/04/2003	Scott E. Hrastar	20277-008001	7780
26167 7590 08/10/2007 FISH & RICHARDSON P.C. P.O BOX 1022 Minneapolis, MN 55440-1022			EXAMINER TIV, BACKHEAN	
			ART UNIT 2151	PAPER NUMBER
			MAIL DATE 08/10/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/700,914	HRASTAR, SCOTT E.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Backhean Tiv	2151	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11/04/2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11/4/2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/04,3/04,4/04,5/05,11/05</u>                                 | 6) <input type="checkbox"/> Other: _____                          |

***Detailed Action***

Claims 1-38 are pending in this application.

***Information Disclosure Statement***

The IDS filed on, 2/9/2004, 3/24/2004, 4/12/2004, 5/5/2005, 11/29/2005 have been considered.

Stipulate whether each and every individually cited reference listed on the IDS(s) submitted 3/4/2004 is material to the patentability of the instant application; the applicant may either *agree* or *disagree* for each cited reference.

1. Identify, for each and every citation listed on the IDS(s) submitted 3/4/2004, for which applicant *agrees* is material to the patentability:
  - a. The differences between the claimed invention and those references cited therein,
  - b. How each reference is material to the patentability, based upon the technical and legal knowledge of the Applicant, of the claimed invention,
  - c. Provide how the instant claimed invention is an improvement over each and every reference that is listed in the IDS submission(s) dated 3/4/2004.

***Drawings***

The drawings filed on 11/4/2003 are acceptable.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 33-37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 33-37, recites "node/node relationship", it is unclear. The "/" represents "or", taking that into consideration, the limitation would read "node or node relationship".

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6,766,165 issued to Sharma et al.(Sharma) in view of US Patent 6,920,494 issued to Heitman et al(Heitman).

As per claim 1, Sharma teaches a method for mapping the topology of a wireless network(Fig.1), the method comprising the steps of:

(b) identifying a relationship (1) between at least one of the wireless access points and at least one of the wireless network nodes(Fig.1-5, col.4, lines 45-55 ) or (2) between any two wireless network nodes based on the received scan data, a characteristic of at least one of the wireless access points, a characteristic of at least

one of the wireless network nodes or combinations thereof(Fig.1-5, col.4, lines 45-55);  
and

(c) storing the identified relationship, access point characteristic, node characteristic or combinations thereof in a system data store as topology data(col.15, lines 58- col.6, line39).

Sharma however does not explicitly teach receiving scan data associated with monitoring of one or more network or nodes or combination thereof.

Heitman teaches receiving scan data associated with monitoring of one or more network or nodes or combination thereof(Abstract).

Therefore it would have been obvious to one ordinary skill in the art at the time of the invention to modify the teachings of Sharma to include receiving scan data associated with monitoring of one or more network or nodes or combination thereof as taught by Heitman in order to resolve network topology(Heitman, col.2, lines 60-67).

One ordinary skill in the art at the time of the invention would have been motivated to combine the teachings of Sharma and Heitman in order to provide a system to manage policies for networks(Hietman, col.2, lines 3-30).

As per claim 2., the method of claim 1, and further comprising the step of initiating one or more scans of wireless transmissions to generate the scan data(Heitman, col.31, lines 40-54). Motivation to combine set forth in claim 1.

As per claim 3, the method of claim 2, wherein the step of initiating one or more

scans comprises initiating a plurality of scans(Heitman, col.39, lines 1-39). Motivation to combine set forth in claim 1.

As per claim 4, the method of claim 3, wherein each of the plurality of scans is initiated upon a different wireless sensor(Heitman, col.39, lines 1-39). Motivation to combine set forth in claim 1.

As per claim 5, the method of claim 4, wherein each of the plurality of scans occurs simultaneously(Heitman, col.39, lines 1-39). Motivation to combine set forth in claim 1.

As per claim 6, the method of claim 4, and further comprising the step of repeating the step of initiating the plurality scans(Heitman, col.39, lines 1-39). Motivation to combine set forth in claim 1.

As per claim 7, 9, wherein the repetition step occurs over a particular time period(Heitman, col.39, lines 1-39). Motivation to combine set forth in claim 1.

As per claim 8,10, and further comprising the step of determining the particular time period based upon configuration data, network security threat level, current network activity, historical network activity or combinations thereon(Heitman, col.38, lines64-col.39, lines 55 ). Motivation to combine set forth in claim 1.

As per claim 11, the method of claim 2, and further comprising the step of receiving a mapping request from a user or a computer and wherein the scan initiation step is responsive to the received mapping request(Sharma, col.12, lines 40-59).

As per claim 12, the method of claim 2, wherein the one or more initiated scans are initiated continuously or at periodic intervals(Heitman, col.38, lines64-

col.39, lines 55 ). Motivation to combine set forth in claim 1.

As per claim 13, the method of claim 1, and further comprising the step of (d) formatting the stored topology data based upon a desired output format(Heitman, Figs.28-34). Motivation to combine set forth in claim 1.

As per claim 14, the method of claim 13, and further comprising the step of repeating steps (a) through (d) a plurality of times(Sharma, col.4, lines 15-67, Heitman, Abstract). Motivation to combine set forth in claim 1.

As per claim 15, the method of claim 13, and further comprising the step of (e) storing the formatted topology data in a data store accessible by a server system(Sharma, col.7, lines 15-31).

As per claim 16, the method of claim 15, wherein the server system is an HTTP server, a WAIS server, a gopher server, or an FTP server(Sharma, col.7, lines 15-31).

As per claim 17, the method of claim 13, wherein the desired output format is TIFF, GIF, JPEG, HTML, SMS, MIME, S/MIME, ZIP, SML, SGML, WAP, BMP or combinations thereof(Heitman, Figs.28-34).

As per claim 18, the method of claim 13, and further comprising the step of receiving a mapping request and wherein the formatting step is responsive to the received mapping request(Sharma, Figs.1-5, col.12, lines 40-59).

As per claim 19, the method of claim 18, wherein the mapping request is received from a user or a computer system(Sharma, Figs.1-5, col.12, lines 40-59).

As per claim 20, the method of claim 13, and further comprising detecting a

mapping trigger event based upon the received scan data and wherein the formatting step is responsive to the detected trigger event (Sharma, Figs.1-5, col.12, lines 40-59, Heitman, col.2, lines 3-30). Motivation to combine set forth in claim 1.

As per claim 21, the method of claim 20, wherein the trigger event is a usage volume anomaly, a connectivity pattern anomaly, a policy violation, a security violation or combinations thereof(Sharma, Figs.1-5, col.12, lines 40-59, Heitman, col.2, lines 3-30). Motivation to combine set forth in claim 1.

As per claim 22, the method of claim 1, and further comprising the step of (d) transmitting the stored topology data to a desired output device(Heitman, Figs.28-34). Motivation to combine set forth in claim 1.

As per claim 23, the method of claim 22, and further comprising the step of repeating steps (a) through (d) a plurality of times(Sharma, col.4, lines 15-67, Heitman, Abstract). Motivation to combine set forth in claim 1.

As per claim 24, the method of claim 22, and further comprising the steps of (e) determining a desired output format and (f) formatting the stored topology data based upon the desired output format prior to transmission(Sharma, col.4, lines 15-67, Heitman, Abstract). Motivation to combine set forth in claim 1.

As per claim 25, the method of claim 24, wherein the step of determining the desired output format comprises the step of determining the desired output format based upon configuration data, the desired output device, a mapping request or combinations thereof(Sharma, col.4, lines 15-67, Heitman, Figs.28-34, Abstract). Motivation to combine set forth in claim 1.

As per claim 26, the method of claim 22, and further comprising the step of (e) determining the desired output device(Heitman, Figs.28-34, Abstract). Motivation to combine set forth in claim 1.

As per claim 27, the method of claim 26, wherein step (e) comprises the step of determining the desired output device based upon configuration data, a mapping request or combinations thereof(Sharma, col.4, lines 15-67).

As per claim 28, the method of claim 22, wherein the desired output device is a monitor, a printer, a further processing system, a pager, a telephone, a personal data assistant (PDA), an email account or a combination thereof (Heitman, Figs.28-34, Abstract). Motivation to combine set forth in claim 1.

As per claim 29, the method of claim 22, wherein the desired output device is capable of rendering graphical output and further comprising the step of (e) formatting the topology data in a manner to graphically represent characteristics or relationships prior to transmission(Heitman, Figs.28-34, Abstract). Motivation to combine set forth in claim 1.

As per claim 30, the method of claim 29, wherein the desired output device is capable of rendering color output and wherein the formatting step (e) comprises the step of formatting the topology data in manner using color to represent characteristics or relationships prior to transmission(Heitman, Figs.28-34, Abstract). Motivation to combine set forth in claim 1.

As per claim 31, the method of claim 22, wherein the desired output device is capable of rendering color output and further comprising the step of (e) formatting the

Art Unit: 2151

topology data in manner using color to represent characteristics or relationships prior to transmission(Heitman, Figs.28-34, Abstract). Motivation to combine set forth in claim 1.

As per claim 32, the method of claim 1, and further comprising the step of identifying a relationship between a plurality of the wireless nodes based on the received scan data in which no wireless access point is involved(Sharma, col.12, lines 40-58).

As per claim 33, Sharma teaches a system for mapping the topology of a wireless network(Fig.1), the system comprising:

(a) storage means for storing topology data comprising access point characteristic data, wireless network node characteristic data, access point/node relationship data, node/node relationship data or combinations thereof(Fig.1-5, col.4, lines 45-55, col.15, lines 58- col.6, line 39)

(c) receiving means for receiving data from the monitoring means(col.4, lines 15-33);

(d) analysis means for generating topology data by identifying from data received by the receiving means a characteristic of a wireless network node, a characteristic of an access point, an access point-node relationship, a node-node relationship or combinations thereof and for storing the generated topology data in the storage means(Figs.1-5, col.15, lines 58- col.6, line 39)

Sharma however does not explicitly teach (b)monitoring means for scanning transmissions within a network and generating scan data therefrom;

(e)output means for formatting topology data generated by the analysis means based upon a desired output format and for transmitting the formatted topology data to a desired output device.

Heitman teaches (b)monitoring means for scanning transmissions within a network and generating scan data therefrom(Abstract); (e)output means for formatting topology data generated by the analysis means based upon a desired output format and for transmitting the formatted topology data to a desired output device(Figs.28-34, col.3,lines 33-45).

Therefore it would have been obvious to one ordinary skill in the art at the time of the invention to modify the teachings of Sharma to (b)monitoring means for scanning transmissions within a network and generating scan data therefrom; (e)output means for formatting topology data generated by the analysis means based upon a desired output format and for transmitting the formatted topology data to a desired output device as taught by Heitman in order to resolve network topology(Heitman, col.2, lines 60-67).

One ordinary skill in the art at the time of the invention would have been motivated to combine the teachings of Sharma and Heitman in order to provide a system to manage policies for networks(Hietman, col.2, lines 3-30).

As per claim 34, the system of claim 33, wherein the output means is responsive to a mapping request from a user or a computer system or to a trigger event selected form the group consisting of a usage volume anomaly, a connectivity pattern anomaly, a policy violation, a security violation or combinations

Art Unit: 2151

thereof(Sharma, Figs.1-5, col.12, lines 40-59, Heitman, col.2, lines 3-30). Motivation to combine set forth in claim 1.

As per claim 35, the system of claim 33, wherein the monitoring means is responsive to a mapping request from a user or a computer system or to a trigger event selected from the group consisting of a usage volume anomaly, a connectivity pattern anomaly, a policy violation, a security violation or combinations thereof(Sharma, Figs.1-5, col.12, lines 40-59, Heitman, col.2, lines 3-30). Motivation to combine set forth in claim 1.

As per claim 36, Sharma teaches a system for mapping the topology of a wireless network(col.12, lines 53-58), the system comprising:

(a) a system data store (SDS) capable of storing topology data comprising access point characteristic data, wireless network node characteristic data, access point/node relationship data, node/node relationship data or combinations thereof(Fig.1-5, col.4, lines 45-55, col.15, lines 58- col.6, line 39); and

(b) a system processor comprising one or more processing elements, wherein the system processor is in communication with the SDS and wherein the one or more processing elements are programmed or adapted(Fig.1-5) at least to:

(2)receive data associated with monitoring of one or more wireless access points, one or more wireless network nodes or combinations thereof(col.4,lines 15-33);

(3) identify a relationship (i) between at least one of the wireless access points and at least one of the wireless network nodes or (ii) between any two wireless

network nodes based on the received scan data, a characteristic of at least one of the wireless access points, a characteristic of at least one of the wireless network nodes or combinations thereof(Fig.1-5, col.4, lines 45-55);

(4) store the identified relationship, access point characteristic, node characteristic or combinations thereof in the SDS as topology data(Fig.1-5, col.4, lines 45-55, col.12, lines 53-58).

Sharma however does not explicitly (1)initiate at least one scan of one or more access points, one or more network nodes or combinations thereof; and (5)format topology data generated based upon a desired output format and (6) output the formatted topology data to a desired output device.

Heitman teaches (1)initiate at least one scan of one or more access points, one or more network nodes or combinations thereof(Abstract); and (5)format topology data generated based upon a desired output format and (6) output the formatted topology data to a desired output device(Figs.28-34, col.3,lines 33-45).

Therefore it would have been obvious to one ordinary skill in the art at the time of the invention to modify the teachings of Sharma to (1)initiate at least one scan of one or more access points, one or more network nodes or combinations thereof; and (5)format topology data generated based upon a desired output format and (6) output the formatted topology data to a desired output device as taught by Heitman in order to resolve network topology(Heitman, col.2, lines 60-67).

One ordinary skill in the art at the time of the invention would have been motivated to combine the teachings of Sharma and Heitman in order to provide a system to manage policies for networks(Hietman, col.2, lines 3-30).

As per claim 37, the system of claim 36, and further comprising (c) a wireless receiver that monitors wireless transmissions, wherein the wireless receiver is in communication with the system processor and wherein the system processor's programming or adaptation to initiate at least one scan includes at least programming or adaptation to initiate the scan using the wireless receiver and wherein its programming or adaptation to receive scan data includes at least programming or adaptation to receive scan data from the wireless receiver or from an interface therewith(Sharma, Fig.1-5, col.4, lines 45-55, col.12, lines 53-58, Hietman, Figs.28-34, col.3,lines 33-45).

As per claims 38, do not teach or further define over the limitations in claims 1,33,36. Therefore claims 38 are rejected for the same reasons set forth above.

### ***Conclusion***

**Examiner's Note:** Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in its entirety as potentially teaching of all or part of the claimed invention.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

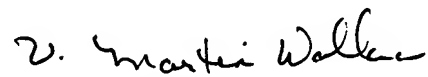
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Backhean Tiv whose telephone number is (571) 272-5654. The examiner can normally be reached on M-F 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Valencia Wallace can be reached on (571) 272-3440. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



BackheanTiv  
2151  
8/3/07



VALENCIA MARTIN-WALLACE  
PRIMARY EXAMINER